REMARKS

A. Remarks Regarding the Claims.

Claims 1 - 38 are pending in this application.

Claims 34 - 38 were allowed and claims 8, 9, 13, 15, 16, 23, 24, 28, 30 and 31 were amended to overcome Examiner's objections in Applicant's August 14, 2002 Response to Office Action.

Claims 1 - 7, 10 - 12, 14, 17 - 22, 25 - 27, 29 and 32 were canceled without prejudice in Applicant's August 14, 2002 Response to Office Action.

Claim 33 has been canceled without prejudice in this Supplemental Response to Office Action.

Applicant respectfully requests that the Examiner expeditiously allow this case to issue.

B. Remarks Regarding the Specification.

A replacement paragraph has been provided to correct a typographical error noted by the Examiner in a drawing reference number. Applicant respectfully submits that no new matter has been added to the paragraph.

SUMMARY

Applicants believe that the above remarks and amendments are sufficient to overcome the Examiner's objections. Applicants therefore respectfully request entry of these amendments and subsequent allowance of the application.

Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone or facsimile. If there are any fees due is association with the filing of this Response, including any fees for extensions of time, Applicants respectfully request that the Commissioner

accept this a Petition therefore, and direct that any and all fees due are charged to Baker Botts L.L.P. Deposit Account No. 02-0383, *(formerly Baker & Botts, L.L.P.)* Order Number 069685.0103.

Respectfully submitted,

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Attachment A

CLEAN VERSION OF ALL PENDING CLAIMS

1. – 7. CANCELED

8. A flow measuring apparatus comprising:

a) a metering reservoir, the metering reservoir having a volume, a reservoir inlet port, a reservoir outlet port, a top and a bottom;

b) a control valve, the control valve capable of allowing or stopping liquid from entering the metering reservoir;

c) a liquid level sensor, the liquid level sensor located so as to able to sense a fluid level within the metering reservoir and operably connected to an upper limit switch and a lower limit switch, the upper limit switch having an upper set point and the lower limit switch having a lower set point; and

d) an electronics module, the electronics module in electrical communication with the upper limit switch and the lower limit switch and further in electrical communication with the control valve

wherein the volume of the metering reservoir between the upper set point and the lower set point has an error tolerance of less than 1%.

9. The flow measuring apparatus of claim 8 wherein the volume of the metering reservoir between the upper set point and the lower set point has an error tolerance of less than 0.1%.

10. –12. CANCELED

13. The flow measuring apparatus of claim 8 wherein the metering reservoir further comprises a breather vent, the breather vent located on the top of the metering reservoir.

14. CANCELED

15. The flow measuring apparatus of claim 8 further comprising a power supply, the power supply capable of supplying power to the electronics module, wherein the power supply comprises a battery, a solar panel, or current converted to a 12-volt dc power level.

16. The flow measuring apparatus of claim 8 further comprising a pump, the pump capable of removing fluid from the metering reservoir through the metering reservoir outlet port.

17. – 22. CANCELED

23. A flow measuring apparatus comprising:

a) a metering reservoir, the metering reservoir having a volume, a reservoir inlet port, a reservoir outlet port, a top and a bottom;

b) a tank outlet conduit, the tank outlet conduit capable of conducting fluid to the reservoir inlet port;

c) a control valve, the control valve capable of allowing or stopping liquid from flowing from entering the metering reservoir;

d) a liquid level sensor, the liquid level sensor located so as to able to sense a fluid level within the metering reservoir and operably connected to a lower switch, the lower limit switch having a lower set point;

e) a paddlewheel, the paddlewheel having a central pivot point and paddles, the paddles radiating from the central pivot point, the paddles capable of rotating about the central pivot point, the paddlewheel located within the tank outlet conduit and capable of rotating in response to fluid flow through the tank outlet conduit; and

f) an electronics module, the electronics module in electrical communication with the paddlewheel and the lower limit switch and further in electrical communication with the control valve

wherein the volume of the metering reservoir has an error tolerance of less than 1%.

24. The flow measuring apparatus of claim 23 wherein the volume of the metering reservoir has an error tolerance of less than 0.1%.

[25. – 27. **CANCELED**]

28. The flow measuring apparatus of claim 23 wherein the metering reservoir further comprises a breather vent, the breather vent located on the top of the metering reservoir.

[29. **CANCELED**]

30. The flow measuring apparatus of claim 23 further comprising a power supply, the power supply capable of supplying power to the electronics module, wherein the power supply comprises a battery, a solar panel, or current converted to a 12-volt dc power level.

31. The flow measuring apparatus of claim 23 further comprising a pump, the pump capable of removing fluid from the metering reservoir through the metering reservoir outlet port.

[32. – 33. **CANCELED**]

34. A method of measuring a small volume flow comprising:

a) providing a flow measuring apparatus, the flow measuring apparatus comprising a holding tank, the holding tank having a height, a bottom, and a holding tank outlet port; a metering reservoir, the metering reservoir in fluid communication with the holding tank and further having a volume, a reservoir inlet port, a reservoir outlet port, a top and a bottom; a control valve disposed between the holding tank and the metering reservoir, the control valve capable of allowing or stopping liquid from flowing from the holding tank to the metering reservoir; a liquid level sensor, the liquid level sensor located so as to able to sense a fluid level within the metering reservoir and operably connected to an upper limit switch and a lower limit switch, the upper limit switch having an upper set point and the lower limit switch having a lower set point; and an electronics module, the electronics module in electrical communication with the upper limit switch and the lower limit switch and further in electrical communication with the control valve;

b) providing a fluid within the holding tank, the fluid in the holding tank having a volume;

c) opening the control valve to allow fluid flow between the holding tank and the metering reservoir;

d) filling the metering reservoir with the fluid until the upper limit switch is activated;

e) closing the control valve to stop fluid flow between the holding tank and the metering reservoir;

f) emptying the metering reservoir of fluid until the lower limit switch is activated; and

g) measuring the fluid emptied from the metering reservoir.

35. The method of measuring a small volume flow of claim 34 wherein the step of calculating the fluid emptied from the metering reservoir is accomplished with the electronics module or separately located monitoring equipment.

36. The method of measuring a small volume of flow of claim 35 further comprising: calculating the volume of fluid in the holding tank.

37. The method of measuring a small volume flow of claim 34 further comprising: powering the electronics module with a battery, a solar panel, or current converted to a 12-volt dc power level.

38. The method of measuring a small volume flow of claim 34 further comprising after step (f): injecting the fluid into a second fluid.

Attachment B

MARKED-UP VERSION OF AMENDED SPECIFICATION PARAGRAPH

At page 8, lines 2-19, the specification has been amended as follows:

> The present invention describes an apparatus and method for delivering a small volume of a fluid to be injected to a second fluid of a much larger volume. Often, less than one gallon per day of the fluid to be injected is transferred to the second fluid. The second fluid may be a liquid or a gas. In one embodiment of the present invention, the chemical injection pulse generator ("CIPG") is show in Fig. 1. CIPG 10 is primarily composed of two pieces of equipment, metering reservoir 30 and electronics module 40. The fluid to be injected is typically contained in chemical holding tank 20. The fluid to be injected may be nearly any liquid or slurry that is capable of flow. Chemical holding tank 20 may be a tank, drum, or any other container acceptable for use in storage of the fluid to be injected. Depending on the type of fluid to be injected, it may be desirable to provide an inert or dry atmosphere within chemical holding tank 20, such as through a nitrogen or air blanket. Further, chemical holding tank **[30]20** may be insulated, heat traced or steam jacketed for viscous fluids to be injected. The fluid to be injected may be transferred from chemical holding tank 20 through tank outlet conduit 25 to metering reservoir 30. The fluid to be injected is discharged from chemical holding tank 20 through chemical holding tank outlet port 22. Chemical holding tank outlet port 22 is generally on or near the bottom of chemical holding tank 20 in order to fully drain chemical holding tank 20, when required, and also to provide as much liquid head throughout CIPG 10 as possible. However, the location of chemical holding tank outlet port 22 may be adjusted based on local conditions. Chemical holding tank 20 should be constructed of a material compatible with the fluid to be injected.